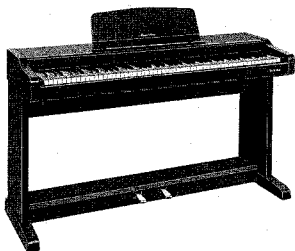


Service Manual

PCM Digital Piano

SX-PX201/201M

(M), (MC), (XM), (EN), (EH), (EF), (EZ), (EW), (EA),
(EP), (EK), (XL), (XR), (XS), (XD), (X), (XT)



AREAS

(M): U.S.A.	(EP): Spain, Portugal
(MC): Canada	(EK): the United Kingdom
(XM): Mexico	(XL): New Zealand
(EN): Norway, Sweden,	(XR): Australia
Denmark, Finland	(XS): Malaysia, Singapore
(EH): Holland, Belgium	(XD): Saudi Arabia
(EF): France, Italy	(X): Hong Kong, the
(EZ): Germany	Philippines, Thailand
(EW): Switzerland	(XT): Taiwan
(EA): Austria	

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

■ Specifications

KEYBOARD	88 KEYS (MAX. POLYPHONIC 32 NOTES)
SOUNDS	GRAND PIANO, UPRIGHT PIANO, E PIANO 1, E PIANO 2, HARPSI, PIPE ORGAN
PEDAL	SOFT/SOSTENUTO, SUSTAIN
DIGITAL CELESTE	○
DIGITAL REVERB	○ (ROOM, STAGE, HALL)
TOUCH SENSITIVITY	LIGHT, NORMAL, HEAVY
TRANPOSE	G-C-F#
TUNING	427.3-440.0-453.0 Hz
DEMO	○
MIDI	MULTI TIMBRE, LOCAL CONTROL, OMNI ON, PROGRAM CHANGE, TRANPOSE
MODE SET	PIANO TUNING, MINIMUM RANGE, SOSTENUTO
OTHERS	POWER SWITCH, MAIN VOLUME, MIDI TERMINALS (IN, OUT, THRU), PEDAL IN, AUX IN (R/R+L, L), LINE OUT (R/R+L, L), PHONES X2, AC IN, INITIAL KEY
OUTPUT	20W X 2
SPEAKERS	14 cm X 2
POWER REQUIREMENT	145 W, 90 W (NORTH AMERICA AND MEXICO) AC 120/220/240 V 50/60 Hz AC 120 V 60Hz (NORTH AMERICA AND MEXICO) AC 230 V 50/60Hz (NEW ZEALAND AND EUROPE EXCEPT FOR UNITED KINGDOM) AC 230-240 V 50/60Hz (UNITED KINGDOM)

Technics

© 1994 Matsushita Electric Industrial CO., LTD. All rights reserved.
Unauthorized copying and distribution is a violation of law.

DIMENSIONS (W X H X D)	137.3 cm X 97.3 cm X 45.3 cm (54-1/16" X 38-5/16" X 17-27/32")
NET WEIGHT	44 Kg (97.0 lbs)
ACCESSORIES	MUSIC STAND, AC CORD, STAND

*Specifications are subject to change without notice for further improvement.

CONTENTS

■ INTRODUCTION

SAFETY PRECAUTION	I-1
HOW TO ASSEMBLE THE PIANO	I-2
KEYBOARD RANGES	I-3
INITIAL SETTING	I-3
ARRANGEMENT OF CONTROL PANEL	I-4
BASIC FUNCTIONS	I-4
TERMINALS	I-6
PARTS LOCATION	I-7
DISASSEMBLY INSTRUCTIONS	I-8
SYMPTOMS WHICH APPEAR TO BE SIGNS OF TROUBLE	I-10
ABOUT THE SELF-DIAGNOSTIC FUNCTION	I-11
MIDI IMPLEMENTATION CHART	I-13
PRECAUTIONS BEFORE SERVICING	I-14

■ SCHEMATIC DIAGRAMS

WIRING CONNECTION DIAGRAM	II-1
BLOCK DIAGRAM	II-3
MAIN MAIN P.C. Board	II-6
MAIN MAIN P.C. Diagram	II-9
AS ACP HP AS/ACP/HP P.C. Board	II-13
AS ACP HP AS/ACP/HP P.C. Diagram	II-17
CP PKB CP/PKB P.C. Diagram	II-19
CP PKB CP/PKB P.C. Board	II-21
MKB1 MKB2 MKB1/2	II-24
JACK JACK	II-27

■ REPLACEMENT PARTS LIST

P.C. Board/WIRING	III-1
CABINET PARTS LOCATION	III-5
CABINET/CHASSIS PARTS	III-7
PACKING	III-10

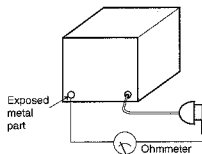
SAFETY PRECAUTION

● Safety Precaution

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only the manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc..
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

● Insulation Resistance Test

1. Unplug the power cord and short the prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screw heads, connectors, control shafts, handle brackets, etc.. Measurements should range from 4 MΩ to infinity for all exposed parts.

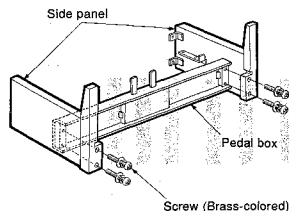


Resistance = 4 MΩ to ∞

HOW TO ASSEMBLE THE PIANO

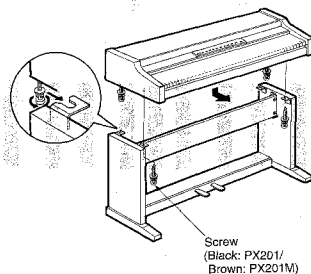
To prevent the piano unit from falling off the stand, secure it firmly with the screws.

- 1 Assemble the side panels and the pedal box with the 4 brass-colored screws.



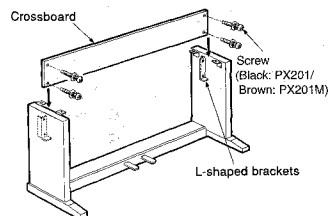
[Fig. 1]

- 3 Place the piano unit on the stand and secure it to the stand.



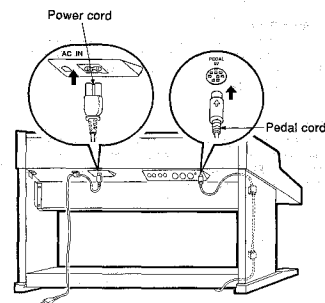
[Fig. 3]

- 2 Place the stand upright. Secure the crossboard to the front of the L-shaped brackets with 4 screws.



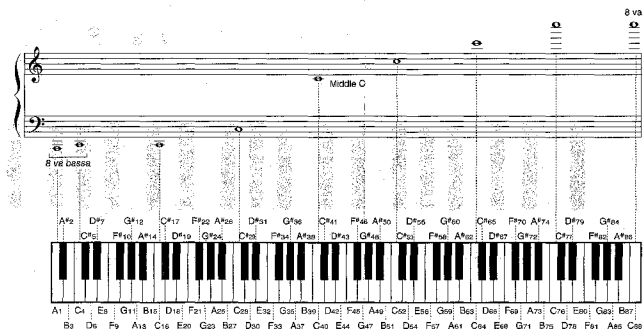
[Fig. 2]

- 4 Connect the pedal cord and power cord to their sockets located rear of the piano unit as shown below.



[Fig. 4]

KEYBOARD RANGES



INITIAL SETTING

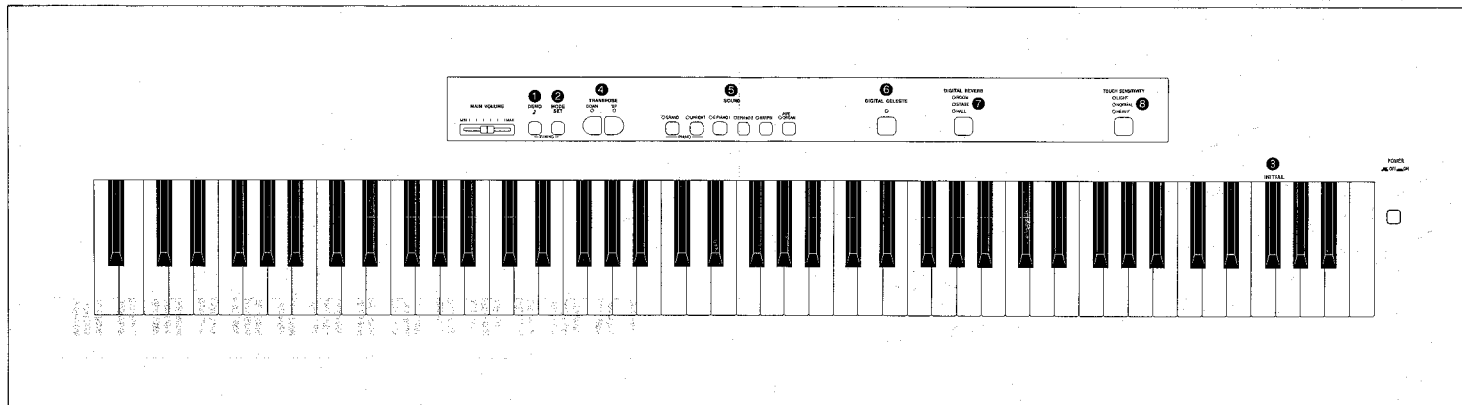
The initial setting function is used to return to the original factory settings, and to reset the customer settings and misoperations. The selected sound and various functions, MIDI settings are initialized with this operation.

■ INITIAL SETTING

Press the **INITIAL** key while the **MODE SET** button is pressed. Or turn on the **POWER** switch while pressing the **INITIAL** key.

1. While pressing the **MODE SET** button.
2. Press the **INITIAL** key.

ARRANGEMENT OF CONTROL PANEL



BASIC FUNCTIONS

1 DEMO

Automatic demonstration performances stored in the piano's memory introduce the various sounds available. Listen to all the demonstration tunes in order, or listen to the demo tune of a specific sound.

2 MODE SET, 3 INITIAL KEY

Used when selecting functions to set or adjust, including type of piano tuning, minimum range (volume), sostenuto, initialization, plus all settable MIDI functions.

•If the INITIAL KEY is pressed while the MODE SET button is depressed, the settings of the buttons, etc. will return to the initialized settings made by the manufacturer.

4 TRANSPOSE

C is the standard setting, but you can raise or lower the key of the entire instrument within a one-octave range with these two buttons. The buttons are also used for adjusting the volume balance of mixed sounds.

5 SOUND

Select from 6 different sounds for the piano. You can mix sounds by selecting two simultaneously. All sounds feature Touch Response.

6 DIGITAL CELESTE

Apply a celeste effect to give the sound greater depth. The setting is memorized independently for each sound.

7 DIGITAL REVERB

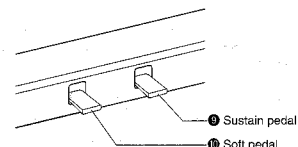
Add a reverb effect to the sound. Choose one of three different echo types. The setting is memorized independently for each sound.

8 Sustain Pedal

The sound is sustained when a key is released while this pedal is depressed. For **GRAND PIANO** and **UPRIGHT PIANO** sounds, the tones of the 17 rightmost keys are automatically sustained.

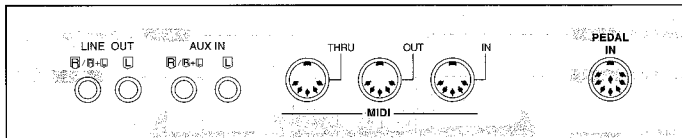
10 Soft pedal

Press the pedal for softer, muted sound. It can also be used as a sostenuto pedal. When used as a sostenuto pedal, and **PIPE ORGAN** is selected, the tones continue to sound for as long as the pedal is depressed.



TERMINALS

(on the rear panel)



LINE OUT (output level 1.5 Vrms, 600 Ω)

By plugging into an external high-power amplifier, the sound can be reproduced at a high volume. Or connect a tape recorder and use them as recording terminals. To output monaural sound, connect the external equipment to the **R/R+L** terminal. (Do not connect the **L** terminal.)

AUX IN (input level 0.5 Vrms, 6 kΩ)

Other instruments such as a rhythm machine or sound module can be connected to the piano so that the sound is output from the piano. To receive monaural sound, connect the other instruments to the **R/R+L** terminal. (Do not connect the **L** terminal.)

MIDI (Musical Instrument Digital Interface)

MIDI is the standard specification that enables connection to equipment such as synthesizers and personal computers.

- IN :** The terminal that receives data from external equipment.
- OUT :** The terminal that transmits data from this instrument to external equipment.
- THRU:** The terminal that transfers data from the **IN** terminal directly to other equipment.

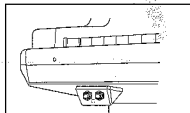
• Use a 5-pin DIN cord (less than 15 m long) for these connections.

PEDAL IN

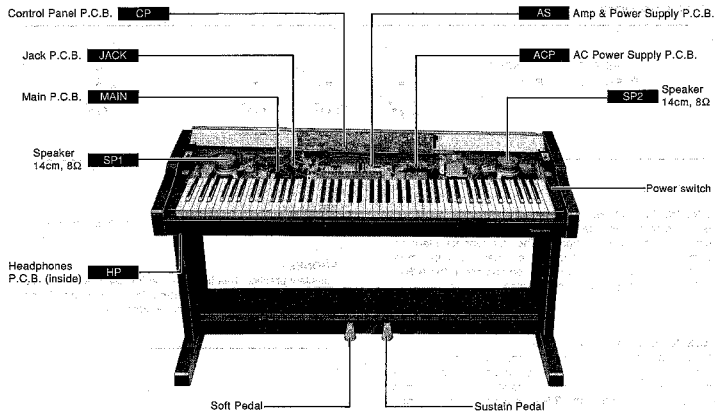
Connect the cord from the included stand to this terminal.

PHONES (∅) ×2

For silent practice, headphones may be used. When plugged in, the speaker system is automatically switched off, and sound is heard only through the headphones.



PARTS LOCATION

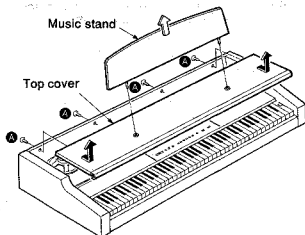


[Photo-1]

DISASSEMBLY INSTRUCTIONS

1 Removing the top cover

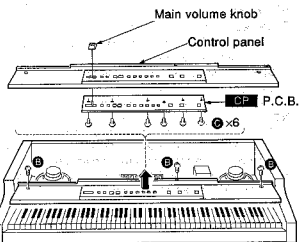
1. Remove the music stand.
2. Remove the top cover holding screws (A 4 pcs.).
3. Slide the top cover forward and lift up.



[Fig.5]

2 Removing the control panel

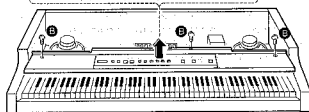
1. Remove the top cover (see Step 1).
2. Remove the control panel holding screws (B 3 pcs.).
3. Remove the control panel as shown in Fig. 6.



[Fig.6]

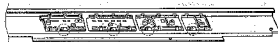
3 Removing the CP P.C.B.

1. Remove the control panel (see Step 2).
2. Remove the main volume knob.
3. Remove the CP P.C.B. mounting screws (C 6 pcs.).



4 Removing the control panel ornament

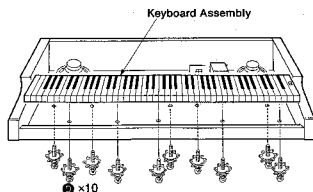
1. Remove the control panel (see Step 2).
2. Remove the CP P.C.B. (see Step 3).
3. Release the control panel ornament holding claws.



[Fig.7]

5 Removing the keyboard assembly

1. Remove the control panel (see Step 2).
2. Remove the keyboard assembly holding screws located on the bottom of the cabinet (10 pcs.).



[Fig.8]

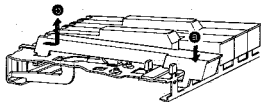
6 Keys (s)

Disassembly

1. Remove the keyboard assembly (see Step 5).
2. To release the key claw.
 - a Press the front of the key downward slightly.
 - b Press the rear of the key forward gently.
3. To remove the key, lift as shown in Fig. 9.

NOTE:

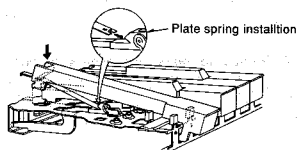
- The key claw is easily broken. Do not apply undue force. Should a key claw break, it can still be used; however, a replacement is recommended.
- If a black key is to be replaced it is necessary to remove both adjacent white keys.



[Fig.9]

Assembly

1. Insert the front part of the key into the chassis.
2. Insert the plate spring into the hammer notch as shown in Fig. 10.
3. While slowly lowering the key into the chassis, insert the plate spring into the notch at the rear of the key.
4. Carefully insert the key into the opening in the chassis and slide the key towards the rear to lock it in place.



[Fig.10]

7 Removing the printed circuit boards

• Remove the top cover (see Step 1).

MAIN P.C.B.

1. Remove the MAIN P.C.B. mounting screws (E 2 pcs.).
2. Release the claws of the P.C.B. holders.

AS P.C.B.

1. Remove the AS P.C.B. mounting screws (F 2 pcs.).
2. Release the claws of the P.C.B. holder.

JACK P.C.B.

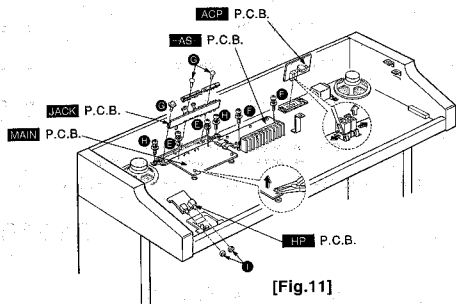
1. Remove the JACK P.C.B. mounting screws (G 3 pcs.).
2. Remove the jack panel mounting screws (H 2 pcs.).

HP P.C.B.

1. Remove the keyboard assembly (see Step 5).
2. Remove the headphone jack mounting nuts (I 2 pcs.).

ACP P.C.B.

- Release the claws of the AC IN connector bracket.



[Fig.11]

SYMPTOMS WHICH APPEAR TO BE SIGNS OF TROUBLE

Phenomenon	Remedy
No sound is produced when the keyboard is played.	• No sound is produced if the MAIN VOLUME is set to MIN.. Use the sliding control to set the volume to an appropriate level. • If the MIDI LOCAL CONTROL is set to off, set it to on.

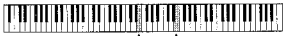
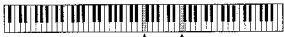
About the back-up memory

The selected sound and various functions, and MIDI settings remain in the memory for about 30 minutes after the **POWER** is turned off. If you wish to return all memories and settings to their factory preset status, while pressing the **MODE SET** button, press the **INITIAL** key on the keyboard. Or, press the **POWER** on and hold the **INITIAL** key at the same time.

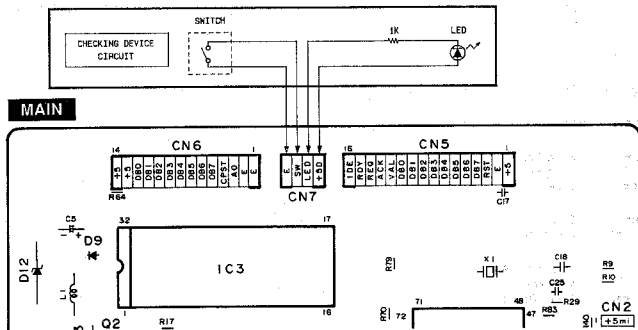
ABOUT THE SELF-DIAGNOSTIC FUNCTION

This model has some self-diagnostic capabilities. When set to the self-diagnostic mode, operation of various components can be verified by following the procedures in the chart below.

No.	PCB	TEST MODE	Procedure
1	MAIN	RAM (IC4), ROM (IC3) check	1. Connect the CHECKING DEVICE (refer to page I-12) to CN 7 on the MAIN P.C.B., and turn on the CHECKING DEVICE switch. 2. Turn on the power switch.
		When the power switch is turned on, the LED of the CHECKING DEVICE flashes 8 times. The first 4 flashes are for the RAM check, and the latter 4 flashes are for the ROM check. The order of the LED flashes corresponds to the respective IC numbers as shown below. If an IC is defective, the corresponding flash time is longer. Examples 1. RAM OK, ROM OK 2. RAM OK, ROM (IC3) defective 3. RAM (IC7) defective, ROM OK NOTE : ● indicates short flash time = OK ■ indicates long flash time = Defective	
2	MAIN	V53 Gate Array (IC2) check	Press and hold the two C keys shown below, and then turn on the power switch. C keys
		Monitor pins 46-48 (DL6-DL4) of IC2 on an oscilloscope, and check whether incremental data (see figure) is output.	
3	CP	Gate array (IC1) check	1. Connect the CHECKING DEVICE to CN 7 on the MAIN P.C.B. (The Checking Device switch should be off). 2. Press and hold the two D keys shown below, and then turn on the power switch. D keys
		When the power switch is turned on, the LED of the CHECKING DEVICE flashes 4 times. The order of the LED flashes corresponds to the CPU (IC) on the respective P.C.B.s as shown below. If an IC is defective, the corresponding flash time is longer. 1. IC1 OK 2. IC1 defective NOTE : ● indicates short flash time = OK ■ indicates long flash time = Defective Gate Array (IC1)	

No.	PCB	TEST MODE	Procedure
4	MAIN	Wave ROM (IC7) check	1. Press and hold the two E keys shown below, and then turn on the power switch. 2. Select the GRAND PIANO sound.  E keys
		When set to the self-diagnostic mode, the Wave ROM outputs a sine wave. If no sound is produced, or if the sound is distorted, the Wave ROM is defective.	
5	CP	Control Panel LED check	Press and hold the two F keys shown below, and then turn on the power switch.  F keys
		Press the buttons on the control panel and confirm that the corresponding LEDs light.	
6	MKB	Keyboard ROM (IC2) check	Press and hold the two B keys shown below, and then turn on the power switch.  B keys
		If the keyboard ROM (IC2) is OK, one confirming beep will sound. If it is defective, several consecutive error beeps will sound.	

■ Connection between serving CHECKING DEVICE and MAIN P.C.B.



MIDI IMPLEMENTATION CHART

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1-16	1-16	memorized
	Changed	1-16	1-16	
Mode	Default	3	1, 3	memorized
	Messages Altered	x —	x —	
Note Number	True voice	*21-108 —	0-127 *0-127	
Velocity	Note ON Note OFF	○ x (9nH: V=0)	○ x	
After Touch	Key's Ch's	x x	x x	
Pitch Bender		x	x	
Control Change	7	x	**○	volume
	64	○	○	sustain pedal
	66	○	○	sostenuto pedal
	67	○	○	soft pedal
	93	○	○	chorus (digital celeste)
Prog Change	True #	○x 0-127	○x 0-5	
System Exclusive		x	x	
System Common	Song Pos	x	x	
	Song Sel	x	x	
	Tune	x	x	
System Real Time	Clock Commands	x x	x x	
Aux Messages	Local ON/OFF	x	x	
	All Notes OFF	○	○	
	Active Sense	x	x	
	Reset	x	x	
Notes	○x Whether or not the data for each of these items is transmitted or received can be set. * Changes depending on the TRANPOSE setting. ** Effective only in the MULTI TIMBRE mode.			

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO
I-13

○ : Yes
x : No

PRECAUTIONS BEFORE SERVICING

■ Precautions for measuring of the output waveforms.

1. The waveform was measured with a "National Digital Storage Oscilloscope VP-5730A". Therefore the waveforms of musical tone signals shown may differ somewhat due to the difference in the timing of triggering.
2. Since the 1/10 test probe is used, the indicated voltage value on the bottom part of each waveform photo is 1/10 of the actual value (e.g. 0.2 V/cm should be 2.0 V/cm).
3. To measure the waveforms, first set this unit to the self-diagnostic mode (refer to page I-12, No. 4). The Wave ROM output will then be output as a sine wave to facilitate the servicing check.

■ Important safety notice:

Components identified by a Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

■ Symbolic Marks

The symbolic marks for resistors and capacitors which used in this circuits are classified as following TABLE-1 and TABLE-2.

1. RESISTORS

- Resistors without symbolic mark are FIXED CARBON FILM RESISTORS (ERD-type).
- All resistors are 1/4 WATT, $\pm 5\%$ TOLERANCE unless otherwise designated in schematic diagrams.

(TABLE-1)

SYMBOL	SPECIFICATION	SYMBOL	SPECIFICATION
Ⓕ	Fixed Carbon Film Resistors "FLAME-PROOF" (ERD—F—type)	Ⓔ	Fixed Metal Film Resistors "FLAME-PROOF" (ERX—type)
Ⓖ	Fixed Wire Wound Resistors "FLAME-PROOF" (ERF—type)	Ⓖ	Fuse Type Fixed Metal Oxide Film Resistors "FLAME-PROOF" (ERQ—type)
Ⓕ	Fixed Metal Oxide Film Resistors "FLAME-PROOF" (ERG—type)	Ⓖ	Fuse Type Fixed Carbon Film Resistors "FLAME-PROOF" (ERD2FC—type)
Ⓖ	Fixed Metal Film Resistors (Precision and High Stability) (ERO—type)		

2. CAPACITORS

- Capacitors without symbolic mark are POLYESTER CAPACITORS. (ECQM-type, ECQG-type, $\pm 10\%$ Tolerance)
- Polarized capacitors without symbolic mark are Aluminum Electrolytic Capacitors. (ECEA-type, $\pm 20\%$ Tolerance)

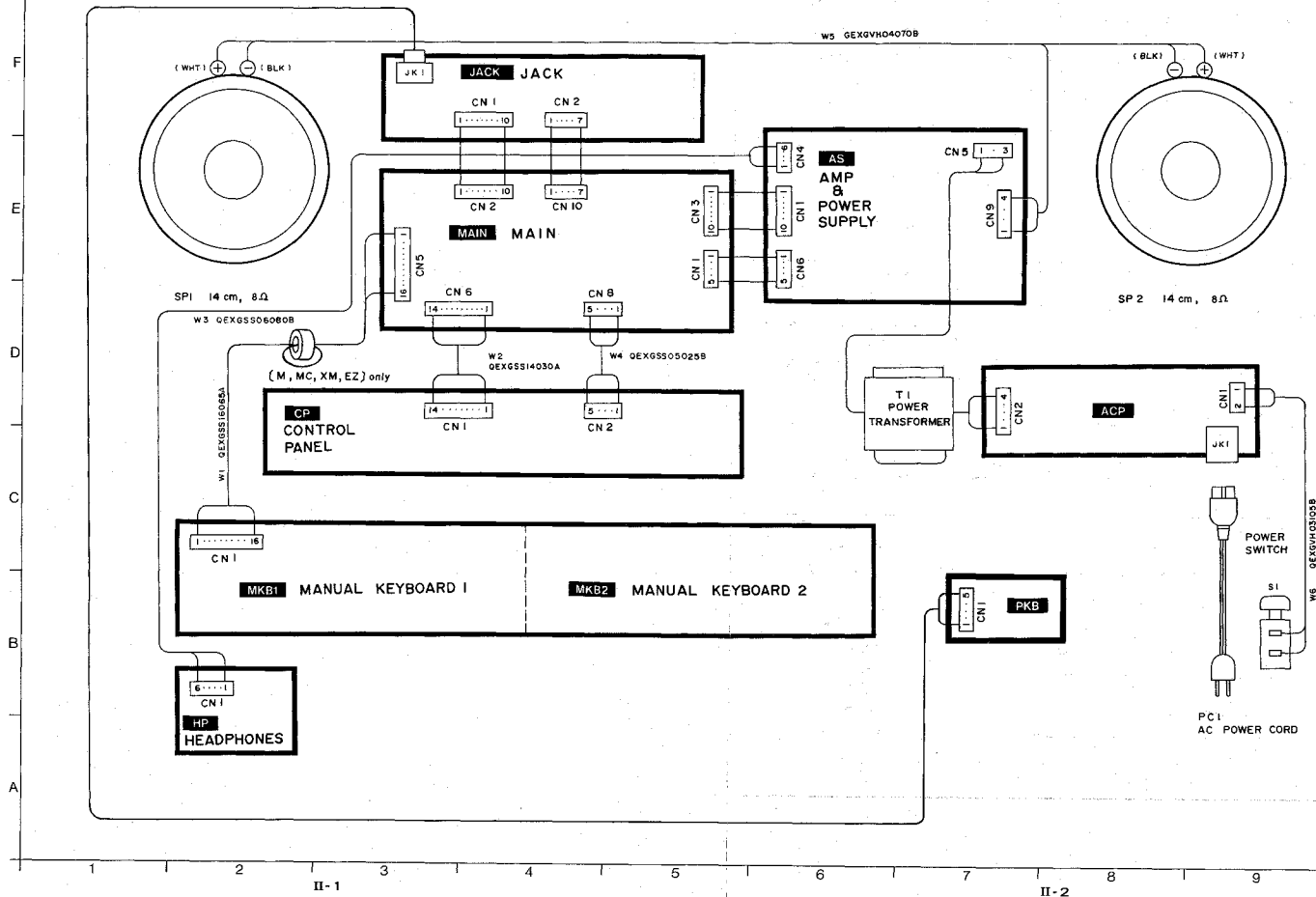
(TABLE-2)

SYMBOL	SPECIFICATION	TYPE
Ⓝ	Non-Polarized Electrolytic Capacitors	ECEA_KN_type
Ⓨ	Non-Polarized Electrolytic (for Network system)	ECEA_Y_type
Ⓣ	Tantalum Solid Electrolytic Capacitors	ECS_type
ⓉⒺ	Metallized Plastic Film Capacitors (TF Series)	ECQV_type
	Temperature Compensating Ceramic Capacitors	ECC_type
○	High-Dielectric Constant Ceramic Capacitors	ECK_type ECR_type
	Axial Lead Ceramic Capacitors	ECB_type
	Metallized Polyester Film Capacitors for Across the Line	ECQ_EW_type
	Aluminum Electrolytic Capacitors for Smoothing Circuit	ECES_type
	Multilayer Ceramic Chip Capacitors	ECUV_type

MEMO

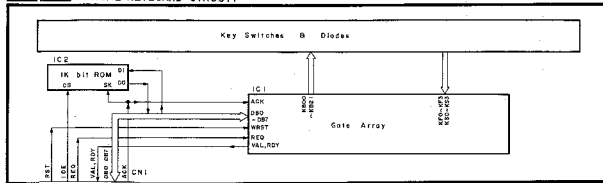
WIRING CONNECTION Diagram

WIRING CONNECTION Diagram

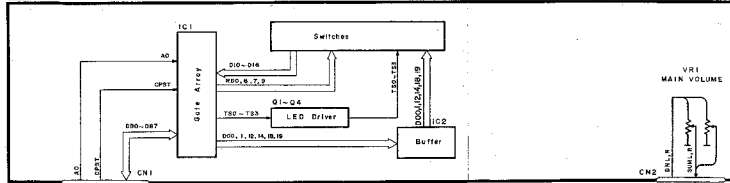


BLOCK Diagram

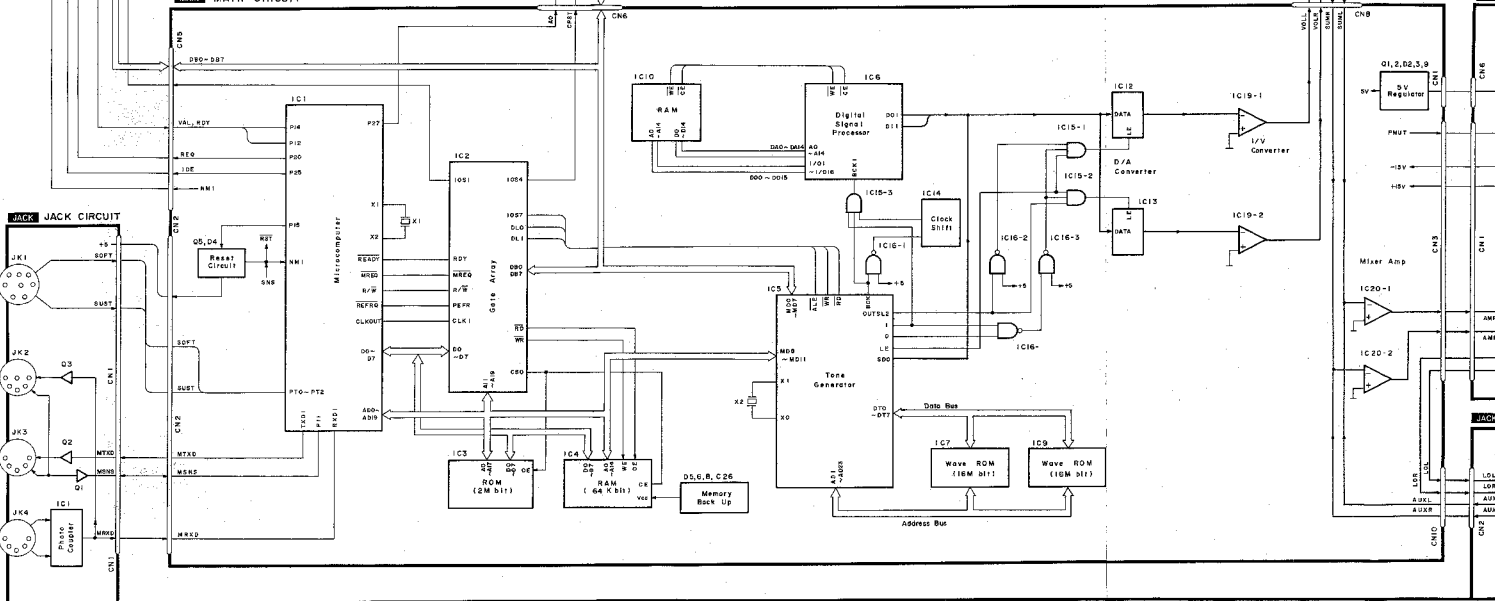
MS1 MS2 MANUAL KEYBOARD CIRCUIT

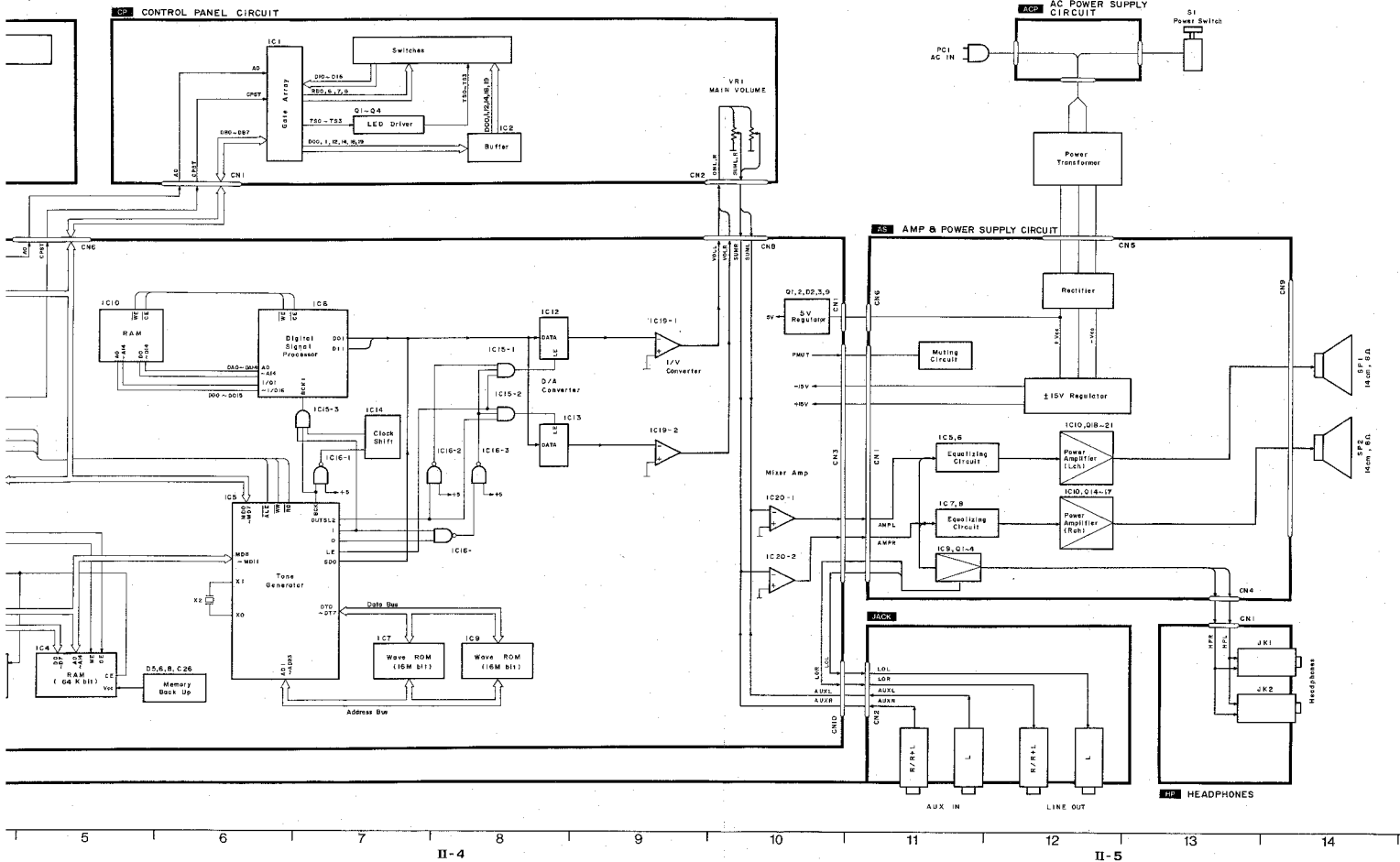


CP CONTROL PANEL CIRCUIT



MAIN MAIN CIRCUIT





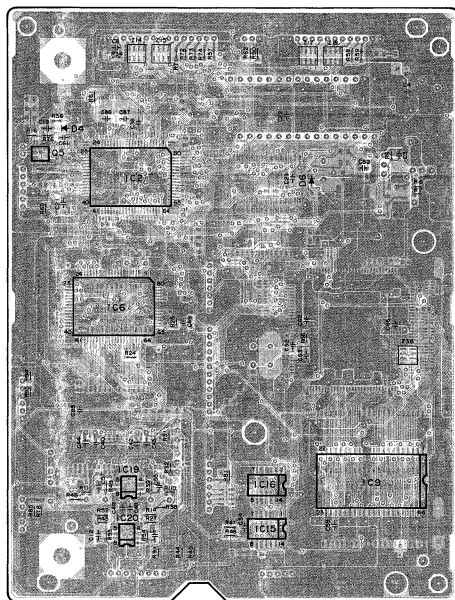
A vertical scale with labels A, B, C, D, E, and F from bottom to top, with horizontal tick marks.

Check Point ③~⑤
Set to the self-diagnostic mode followings.

- While pressing two E keys (①) simultaneously the power switch.
- SOUND GRAND
- Main Volume..... Center
- Keyboard A1 (②)

IC5	
IC6:	SVIGD70320GJ
IC7:	D85012G-A79
IC8:	QS1603C02013
IC9:	M5256BFPP85LL
IC6:	TC25540AF006
IC10:	DS3025F-3B9
IC11:	Q518H3C16CN9
IC9:	Q518H3C16CR0
IC10:	HM65256BFL-A
IC12, 13:	PCM1702U
IC14:	74C41H164G5
IC15:	74V151G5
IC16:	74HC00G5
IC19, 20:	M5218AFP
* TRANSISTORS	
Q1:	2SB9A1
Q2, 3:	2SC1815GR
Q4:	2SA1555GR
Q5:	2SB709AR
Q6:	2SD601AQ
* DIODES	
D1:	MA8047H
D3, 6, 9:	MA1010
D7, 11:	MA8025
D8:	MA8056
D12:	MA2062F

MAIN (FOIL SIDE)



MAIN

NOTES:

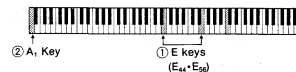
- IC'S
 - IC1: SVIGD70320GJ
 - IC2: D65012GF-A79
 - IC3: Q9IG03C02013
 - IC4: M5256BFPS5LL
 - IC5: TC2540AF006
 - IC6: D6382GF-3B9
 - IC7: Q9IGH3C16CN9
 - IC8: Q9IGH3C16CR0
 - IC10: HM65256BLF10
 - IC12, 13: PCM1702U
 - IC14: D74HC164GS
 - IC15: D74HC11GS
 - IC16: D74HC00GS
 - IC19, 20: M5218AFP
- TRANSISTORS
 - Q1: 2SB941
 - Q2, 3: 2SC1815GR
 - Q4: 2SA1015-GR
 - Q5: 2SB709AR
 - Q6: 2SD601AQ
- DIODES
 - D1: MA9047H
 - D3~6, 9: MA110
 - D7, 11: MA8062
 - D8: MA8056
 - D12: MA2062LF

Measuring Condition

Check Point ④~⑧

Set to the self-diagnostic mode followings.

- While pressing two E keys (①) simultaneously, turn on the power switch.
- SOUND GRAND PIANO
- Main Volume..... Center
- Keyboard..... A₁ (②)

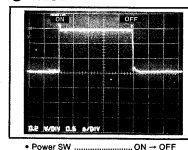


Check Point ①

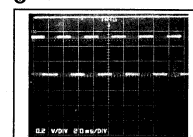
Set the initial setting mode (Refer to Page I-6)

- SOUND GRAND PIANO
- Main Volume..... Center

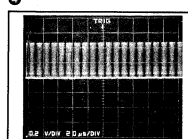
① RESET



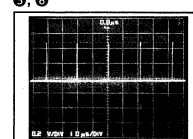
③



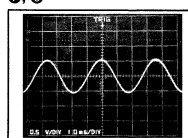
④



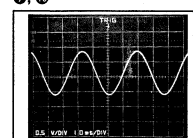
⑤, ⑥

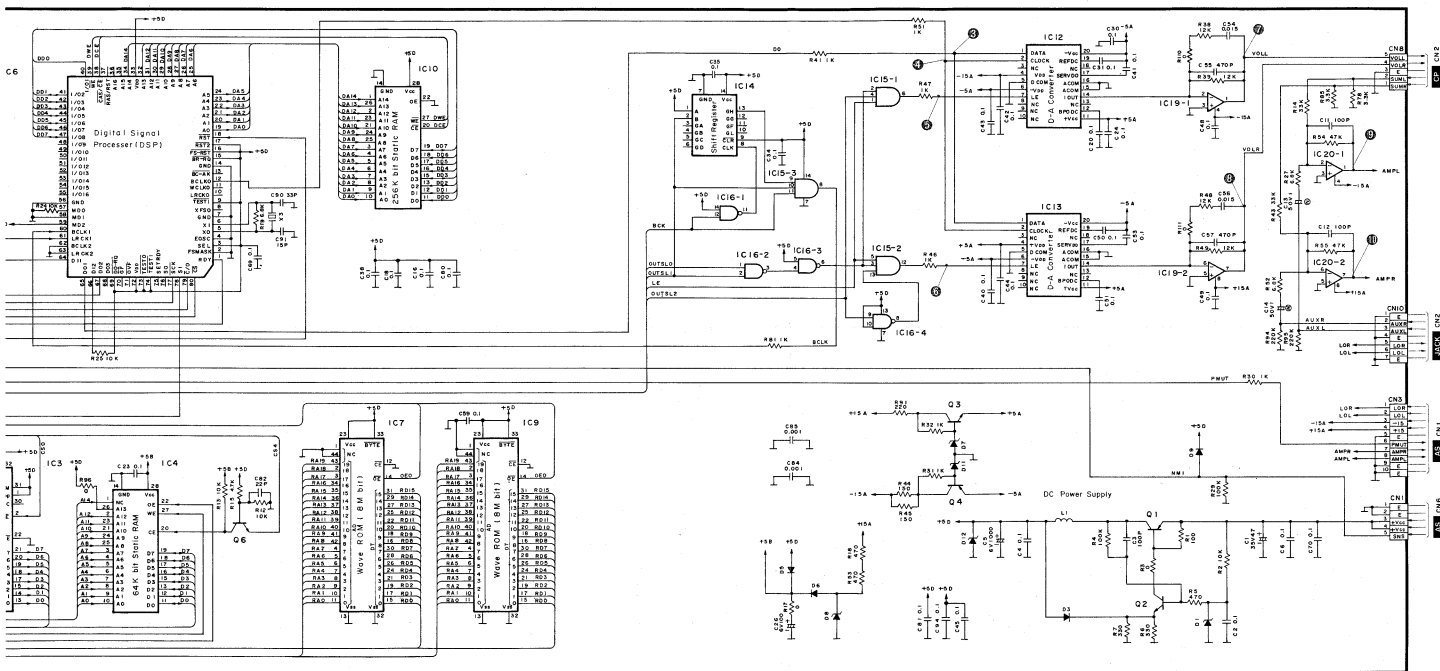


⑦, ⑧



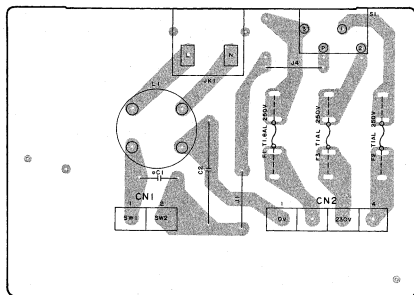
⑨, ⑩





AS/ACP/HP P.C. Board

ACP X XR XS XD XT (SXPG215541)



ACP

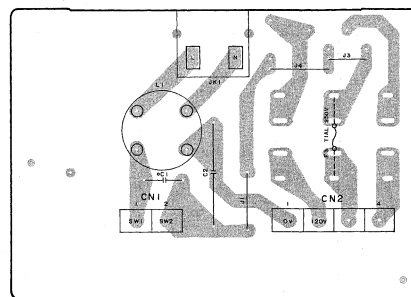
NOTE:

• FUSES

F1: XBA2C16TB0

F2, F3: XBA2C10TB0

ACP Others (SXPG215511)



ACP

NOTE:

• FUSE

F3: XBA2C10TB0

ACP W



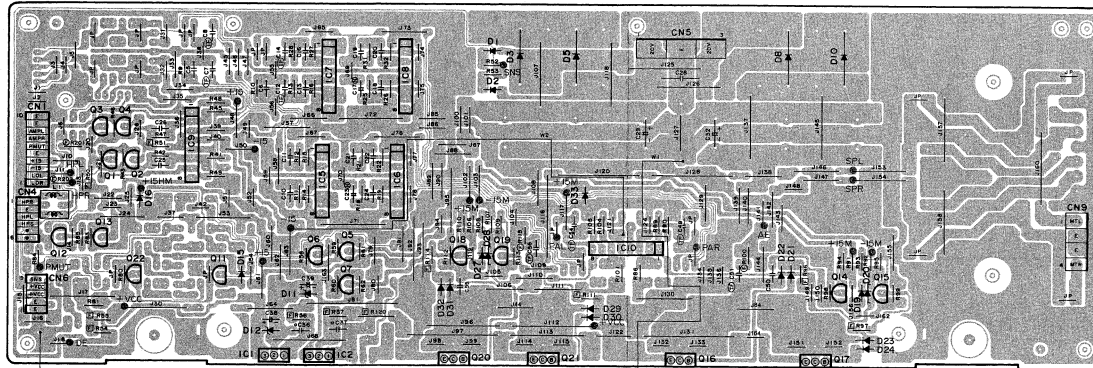
ACP

NOTE:

• FUSE

F1:

AS (SXPG214711)

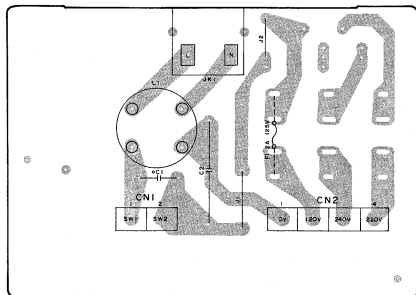


AS

NOTES:

- ICs
 - IC1: SVIGM5F7815
 - IC2: MSF79M15L
 - IC5-10: SVIGM5218L
- TRANSISTORS
 - Q1, 3: 2SC3940ARS
 - Q2, 4: 2SA1534AR
 - Q5, 6, 13, 15, 2SA1015-GR
 - 19, 22: 2SC1815GR
 - Q7, 11, 12, 14, 18: 2SB946P
 - Q16, 20: 2SD1271P
 - Q17, 21: 2SD1271P
- DIODES
 - D1, 2: SVDGERA1502
 - D3, 5, 8, 10: SVDS3V20
 - D11, 12: MA4180
 - D15, 19, 20, MA165
 - 21, 24, 27, 28, 30, 32 EKO4
 - D16, 33: EKO4
 - D22, 23, 29, MA167
 - 31:

ACP **M** **MC** **XM** (SXPG215531)

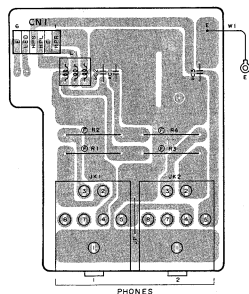


ACP

NOTE:

- FUSE: XBA1C40NU100
- FT:

HP (SXPG210841)



■ Measuring Condition

Check Point ①~⑥

Set to the self-diagnostic mode followings.

- While pressing two E keys (①) simultaneously, turn on the power switch.
- SOUND GRAND PIANO
- Main Volume..... Center
- Keyboard A₁ (②)



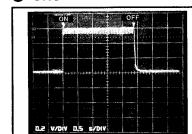
② A₁ Key

① E keys

Check Point ①, ②

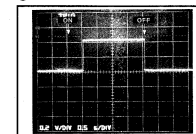
Set the initial setting mode (Refer to Page I-6)

① SNS



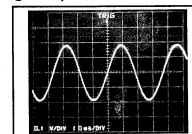
• Power SW ON → OFF

② PMUT

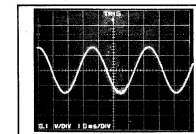


• Power SW ON → OFF

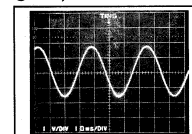
③ HPL, HPR



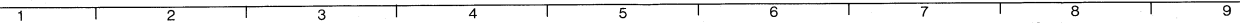
④ PAL, PAR



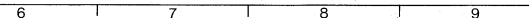
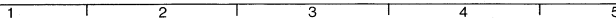
⑤ SPL, SPR



A vertical scale with labels A, B, C, D, E, and F from bottom to top, with horizontal tick marks.

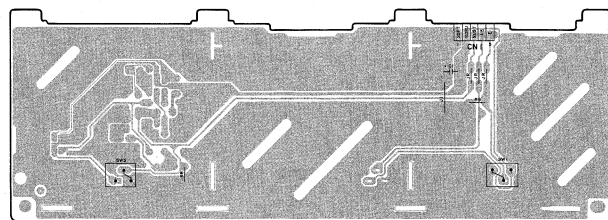
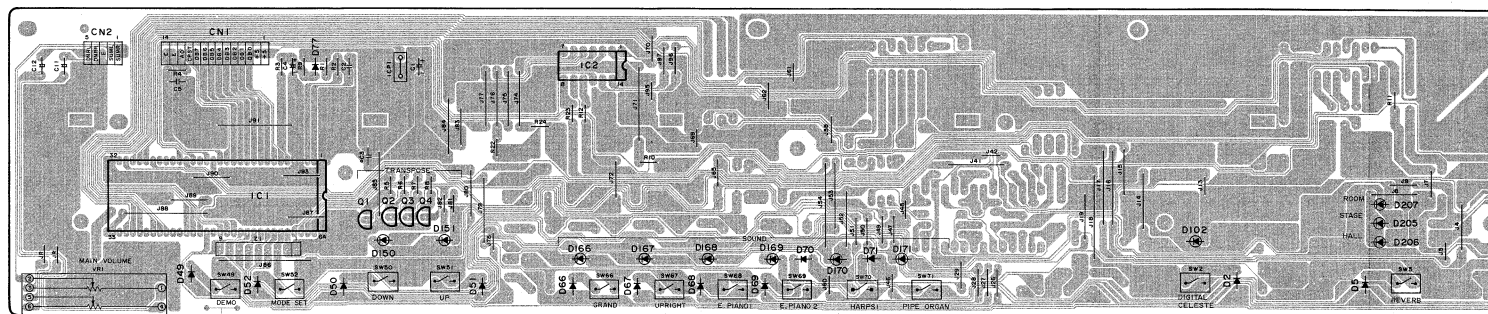


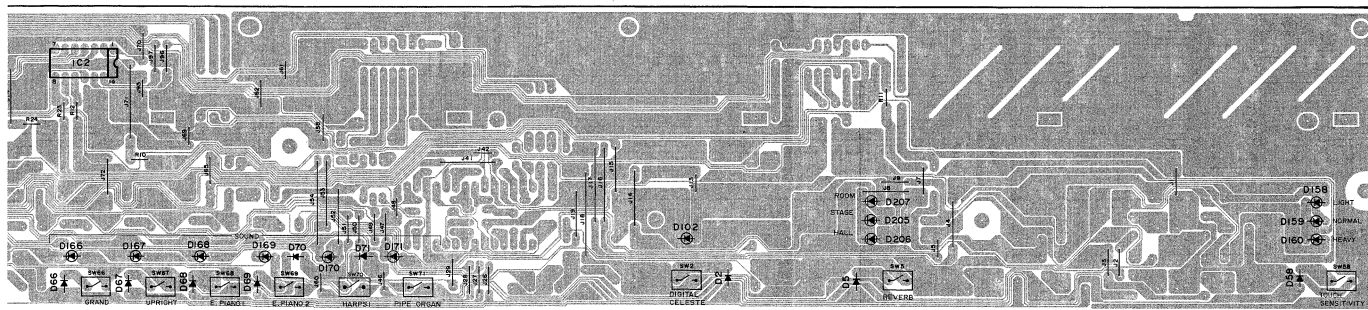
A — B — C — D — E — F



A vertical scale with labels A, B, C, D, E, and F from bottom to top.

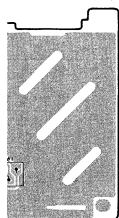
A vertical number line with two tick marks. The lower tick mark is labeled 'D' and the upper tick mark is labeled 'E'.

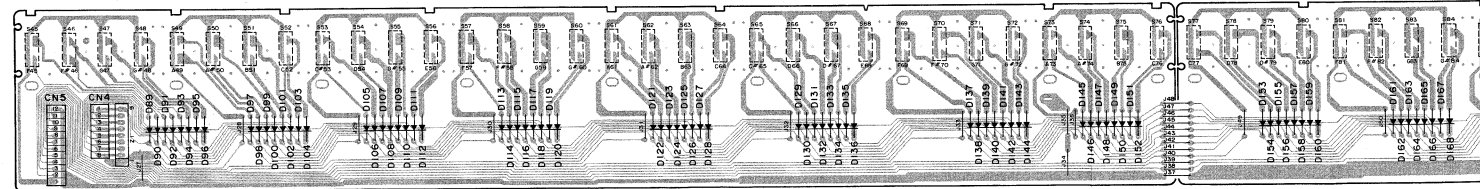


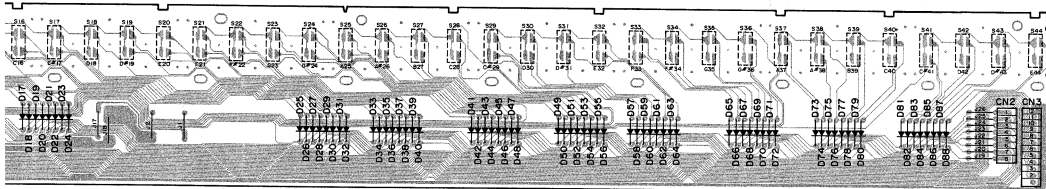
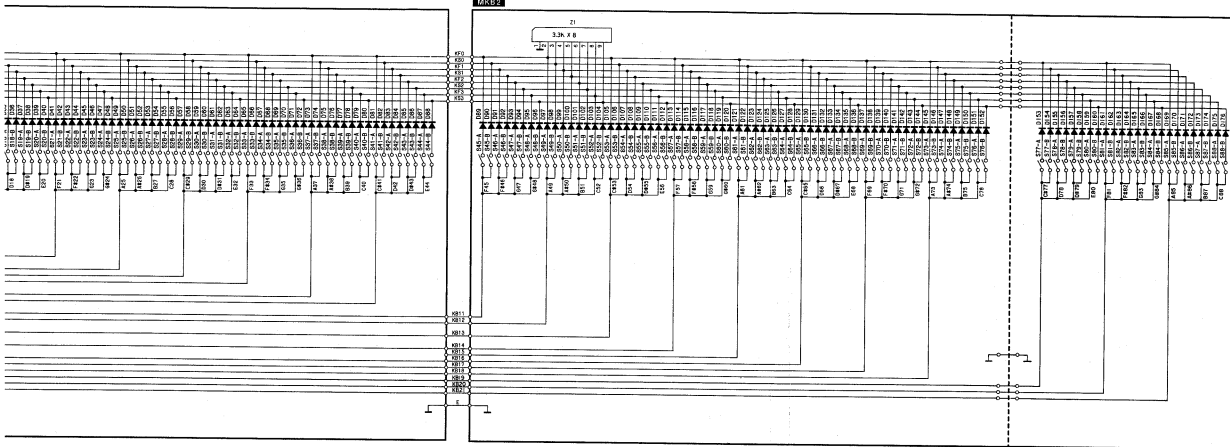


NOTES:

- IC'S
 - IC1: SVIGM603A121
 - IC2: HD74LS07P
- TRANSISTORS
 - Q1~4: 2SA1015-GR
- DIODES
 - D2, 5, 49~52, MA165
 - 58, 66~71, 77: LN282R
 - D102, 150, 151, 158~160, 166~171, 205~207:





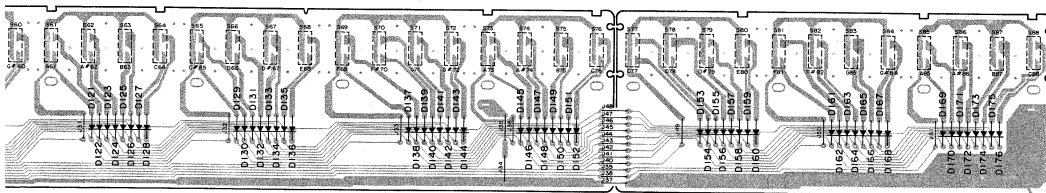


MARK 1

NOTES:

- IC'S
- IC1:
- IC2:
- DIODES
- D1~88:

MSM7U042016
BR93LC46
MA165



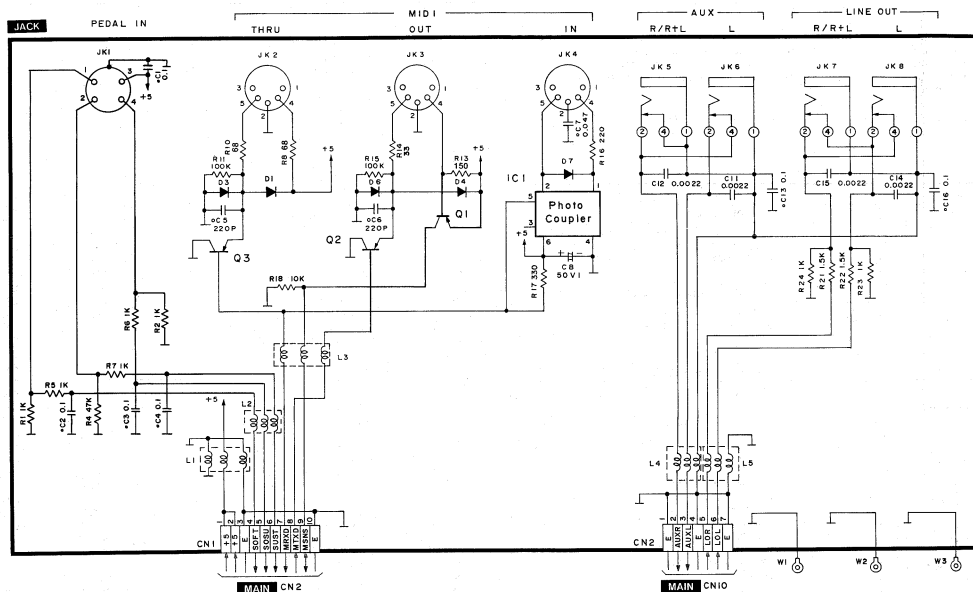
MARK 2

NOTE:

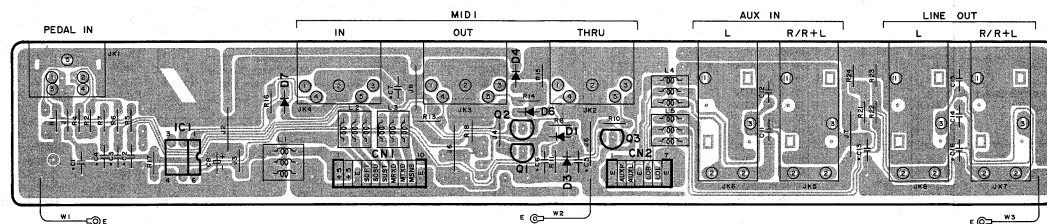
- DIODES
- D89~176:

MA165

JACK



JACK (SXP219611)



JACK

NOTES:

- IC'S SVTGLP513
- TRANSISTORS Q1~3: 2SA1015-GR
- DIODES D1, 3, 4, 6, MA165
- 7:

REPLACEMENT PARTS LIST.....P.C.B. and Wiring Parts

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention.

After the end of this period, the assembly will no longer be available.

2. Important safety notice

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

3. The "S" mark is service standard parts and may differ from production parts.

4. $\bigcirc$ mark are new parts.

5. For part No. with area mark, check the area when placing an order.

PRINTED CIRCUIT BOARD

RTL	Area	Part No.	Description	P/S
$\bigcirc$ RTL		SKPG214681	MAIN	1
		SKPG2147111	AS	1
RTL		SKPG215531	ACP	1
RTL		SKPG215541	ACP	1
Others		SKPG215511	ACP	1
RTL		SKPG210841	HP	1
RTL		SKPG214821	CP	1
RTL		SKPG218231	PKB	1
RTL		SKPG209741A	TRK1	1
RTL		SKPG209741B	TRK2	1
RTL		SKPG219611	JACK	1

MAIN MAIN CIRCUIT

Ref. No.	Part No.	Description	P/S
INTEGRATED CIRCUITS			
IC1	SVIGD70320GJ	16 bit Microcomputer	1
IC2	D65012GF-A79	Gate Array	1
IC3	QSG09C02013	2M bit programmed ROM	1
IC4	M5268P86BL	256K bit STATIC RAM	1
IC5	TC25540AF006	Tone Generator LSI	1
IC6	D6382GF-3B9	Digital Signal Processor	1
IC7	QSG18G16C9N	16M bit Wave ROM	1
IC8	QSG18G16C9R	16M bit Wave ROM	1
IC9	HM5265BLF10	256K bit Pseudo Static RAM	1
IC10, 13	D-41702U	D-A Converter	2
IC14	D74HC164GS	Shift Register	1
IC15	D74HC11GS	3 input AND GATES	1
IC16	D74HC00GS	Quad 2 Input NAND GATES	1
IC19, 20	M5218AFP	Operational Amplifier	2
TRANSISTORS			
Q1	25B941	Transistor	1
Q2, 3	25C1815GR	Transistor	2
Q4	25A1015-GR	25A933STRS (SUB. Part)	1
Q5	25B7094R	Transistor	1
Q6	25D601AQ	Transistor	1
DIODES			
D1	MA8047	Zener, 4.7V	1
D3~8, 9	MA110	Diode	5
D7	MA8062	Zener, 6.2V	1
D8	MA8056	Zener, 5.6V	1
D11	MA8062	Zener, 6.2V	1
D12	MA2062LF	Zener, 6.2V	1
D14	EK04	Diode	1

Ref. No.	Part No.	Description	P/S
OSCILLATORS			
X1	QXG2F1400A	14MHz, Ceramic Oscillator	1
X2	QXG114915A	49MHz, Quartz Oscillator	1
X3	QXG2F2500A	25MHz, Ceramic Oscillator	1
COMPONENT COMBINATIONS			
Z14, 15, 17, 18	EXB58V222J	2.2k $\times$ 4	4
Z31~36	EXB58V47J	470k $\times$ 4	6
Z45~47	EXB58V102J	1k $\times$ 4	3
COIL & LINE FILTER			
L1	QLCGTJR10KA	Coil	1
RESISTORS			
R1	ERJ6GEY101V	100 Ω	1
R2	ERJ6GEY103V	10k Ω	1
R3	ERJ6GEY0R00V	0 Ω	1
R4	ERJ6GEY104V	100k Ω	1
R5	ERJ6GEY1471V	470 Ω	1
R6, 7	ERJ6GEY1331V	330 Ω	2
R8, 10, 12, 13	ERJ6GEY103V	10k Ω	4
R14	ERJ6GEY333V	33k Ω	1
R15	ERJ6GEY472V	4.7k Ω	1
R16	ERJ6GEY102V	1k Ω	1
R17	ERJ6GEY0R00V	0 Ω	1
R18	ERJ6GEY1471V	470 Ω	1
R19	ERJ6GEY682V	6.8k Ω	1
R20, 21, 24, 25	ERJ6GEY103V	10k Ω	4
R27	ERJ6GEY682V	6.8k Ω	1
R29	ERJ6GEY104V	100k Ω	1
R30~32	ERJ6GEY102V	1k Ω	3
R34	ERJ6GEY224V	220k Ω	1
R36	ERJ6GEY104V	100k Ω	1
R37	ERJ6GEY1472V	4.7k Ω	1
R38, 39	ERJ6GEY123V	12k Ω	2
R40	ERJ6GEY1472V	4.7k Ω	1
R41	ERJ6GEY102V	1k Ω	1
R43	ERJ6GEY333V	33k Ω	1
R44, 45	ERJ6GEY151V	150 Ω	2
R46, 47	ERJ6GEY102V	1k Ω	2
R48, 49	ERJ6GEY123V	12k Ω	2
R50	ERJ6GEY103V	10k Ω	1
R51	ERJ6GEY102V	1k Ω	1
R52	ERJ6GEY682V	6.8k Ω	1
R53	ERJ6GEY1471V	470 Ω	1
R54, 55	ERJ6GEY1473V	47k Ω	1
R57	ERJ6GEY102V	1k Ω	1
R58, 59	ERJ6GEY222V	2.2k Ω	2
R61, 62	ERJ6GEY103V	10k Ω	2
R64	ERJ6GEY0R00V	0 Ω	1
R69	ERJ6GEY103V	10k Ω	1

Ref. No.	Part No.	Description	P/S
R70	ERJ6GEY222V	2.2k Ω	1
R71~74	ERJ6GEY102V	1k Ω	4
R75, 76	ERJ6GEY103V	10k Ω	2
R78	ERJ6GEY332V	3.3k Ω	1
R79	ERJ6GEY103V	10k Ω	1
R81	ERJ6GEY102V	1k Ω	1
R82~84	ERJ6GEY103V	10k Ω	3
R85	ERJ6GEY332V	3.3k Ω	1
R86	ERJ6GEY103V	10k Ω	1
R91	ERJ6GEY221V	220 Ω	1
R93	ERJ6GEY103V	10k Ω	1
R94, 95	ERJ6GEY224V	220k Ω	2
R96, 110, 111	ERJ6GEY0R00V	0 Ω	2
CAPACITORS			
C1	ECEA1VU470	47 μ F, 35V	1
C2	ECUV1H104ZFX	0.1 μ F	1
C3	ECUV1H101JG	100pF	1
C4	ECUV1H104ZFX	0.1 μ F	1
C5	ECEA5U102	1000 μ F, 6.3V	1
C6, 8	ECUV1H104ZFX	0.1 μ F	2
C11, 12	ECUV1H101JG	100pF	2
C13, 14	ECEA1HK010	1 μ F, 50V	2
C16~19	ECUV1H104ZFX	0.1 μ F	4
C20~24	ECUV1H104ZFX	0.1 μ F	5
C26	ECEA5U101	100 μ F, 6.3V	1
C30, 31, 34, 35, 38, 40~45	ECUV1H104ZFX	0.1 μ F	11
C48~51, 53	ECUV1H104ZFX	0.1 μ F	5
C54	ECQB1H153JF	0.015 μ F	1
C55	ECUV1H471JG	470pF	1
C56	ECQB1H153JF	0.015 μ F	1
C59, 62, 63	ECUV1H471JG	470pF	3
C61	ECUV1H101JG	100pF	1
C66, 69, 70, 80, 81	ECUV1H104ZFX	0.1 μ F	5
C82	ECUV1H220JN	22pF	1
C84, 85	ECUV1H102JG	0.001 μ F	2
C86, 87	ECUV1H100DCN	10pF	2
C90	ECUV1H150JCN	33pF	1
C91	ECUV1H150JCN	15pF	1
C92	ECUV1H300JCN	3pF	1
C94	ECUV1H104ZFX	0.1 μ F	1

AS AMP & POWER SUPPLY CIRCUIT

Ref. No.	Part No.	Description	P/S
INTEGRATED CIRCUITS			
IC1	SVIGMS57815	+15V Voltage Regulator	1
IC2	M5F79M15L	-15V Voltage Regulator	1
S IC3~10	SVIGMS218L	Operational Amplifier	6
TRANSISTORS			
Q1, 3	25C3840ARS	Transistor	2
Q2, 4	25A153AAR	Transistor	2
S Q5, 6, 13, 15, 19, 22	25A1015-GR	25A933STRS (SUB. Part)	6
S Q7, 11, 12, 14, 18	25C1815GR	Transistor	5
Q16, 20	25B946P	Transistor	2
Q17, 21	25D1271P	Transistor	2
DIODES			
D1, 2	SVDG8FA1502	Rectifier	2
D3, 5, 8, 10	SVDS3V20	Rectifier	4

Ref. No.	Part No.	Description	P/S
D11, 12	MA4180	Zener, 18V	2
D15, 18, 20, 21, 24, 27, 28, 30, 32	MA165	Diode	1
D16, 33	EK04	Diode	2
D22, 23, 29, 31	MA167	Diode	4
COIL & LINE FILTER			
L1	QLGGT31505A	Coil	1
RESISTORS			
R9, 10	ERDS2TJ222	2.2k Ω	2
R11	ERDS2TJ331	330 Ω	1
R12	ERDS2TJ102	1k Ω	1
R13	ERDS2TJ331	330 Ω	1
R14	ERDS2TJ823	82k Ω	1
R15	ERDS2TJ104	100k Ω	1
R16	ERDS2TJ823	82k Ω	1
R18	ERDS2TJ151	150 Ω	1
R19	ERDS2TJ563	56k Ω	1
R21	ERDS2TJ471	470 Ω	1
R22	ERDS2TJ104	100k Ω	1
R25	ERDS2TJ151	150 Ω	1
R26	ERDS2TJ563	56k Ω	1
R28	ERDS2TJ104	100k Ω	1
R29	ERDS2TJ102	1k Ω	1
R31	ERDS2TJ471	470 Ω	1
R32	ERDS2TJ104	100k Ω	1
R41	ERDS2TJ224	220k Ω	1
R42	ERDS2TJ224	220k Ω	1
R43	ERDS2TJ154	150k Ω	1
R45	ERDS2TJ220	22 Ω	1
R46	ERDS2TJ220	22 Ω	1
R47	ERDS2TJ154	150k Ω	1
R48, 49	ERDS2TJ102	1k Ω	2
R50, 51	Δ ERD2FCVJ4R7	4.7 Ω , 1/4W, Fuse Type	2
R52, 53	ERDS2TJ103	10k Ω	2
R54, 55	Δ ERD1AAJ2R5	2.5 Ω , 1/4W, Fuse Type	2
R56, 57	Δ ERD2FCVJ6R8	6.8 Ω , 1/4W, Fuse Type	2
R58~60	ERDS2TJ103	10k Ω	3
R61, 62	ERDS2TJ472	4.7k Ω	2
R80	ERDS2TJ472	4.7k Ω	1
R81	ERDS2TJ104	100k Ω	1
R83	ERDS2TJ103	10k Ω	1
R84	ERDS2TJ473	47k Ω	1
R85	ERDS2TJ332	3.3k Ω	1
R86	ERDS2TJ184	180k Ω	1
R89	ERDS2TJ103	10k Ω	1
R90	ERDS2TJ102	1k Ω	1
R91, 92	ERDS2TJ272	2.7k Ω	2
R93	ERDS2TJ103	10k Ω	1
R94, 95	ERDS2TJ102	1k Ω	2
R96, 97	Δ ERD2FCVJG101	100 Ω , 1/4W, Fuse Type	2
R98, 99	Δ ERDS2TJ331	330 Ω	2
R100	Δ ERD2SFVJ4R7	4.7 Ω , 1/4W, Flame-Proof	1
R101	ERDS2TJ184	180k Ω	1
R104	ERDS2TJ103	10k Ω	1
R105	ERDS2TJ102	1k Ω	1
R106, 107	ERDS2TJ272	2.7k Ω	2
R108	ERDS2TJ103	10k Ω	1
R109, 110	ERDS2TJ102	1k Ω	2
R111	Δ ERD2FCVJG101	100 Ω , 1/4W, Fuse Type	1
R112, 113	ERDS2TJ331	330 Ω	2
R114	Δ ERD2FCVJG101	100 Ω , 1/4W, Fuse Type	1
R115	Δ ERD2SFVJ4R7	4.7 Ω , 1/4W, Flame-Proof	1
R120	Δ ERD2FCVJ6R8	6.8 Ω , 1/4W, Fuse Type	1
R201, 202	Δ ERD2SFVJ4R7	4.7 Ω , 1/4W, Flame-Proof	2

HP HEADPHONES CIRCUIT

Ref. No.	Part No.	Description	PS
CAPACITORS			
C5, 6	EQQB1H103JF	0.01μF	2
C7	EQCB1H223JF	0.022μF	1
C8	EQQB1H153JF	0.015μF	1
C10	EQQB1H223JF	0.022μF	1
C11	EQQB1H152KZ	0.0015μF	1
C12	EQQB1H223JF	0.022μF	1
C13	EQQB1H223JF	0.022μF	1
C14	EQQB1H153JF	0.015μF	1
C16	EQQB1H152KZ	0.0015μF	1
C17	ECEA1HK2R2	2.2μF, 50V	1
C18	EQQB1H153JF	0.015μF	1
C19	EQQB1H224JM	0.022μF	1
C20	EQQB1H222KZ	0.0022μF	1
C21	EQQB1H224JM	0.022μF	1
C22	EQQB1H222KZ	0.0022μF	1
C23	ECEA1HK2R2	2.2μF, 50V	1
C24	EQQB1H152KZ	0.0015μF	1
C26, 28	Δ ECF1H220V	22μF	2
C28	Δ ECEA104M6	0.1μF, 125V	1
C29	ECEA1VU33Z	3300μF, 35V	1
C32	ECEA1VU22Z	2200μF, 35V	1
C36, 37	ECRF1H104ZF	0.1μF	2
C38	ECEA1H147J	10μF, 16V	1
C39	ECEA1C10331	330μF, 16V	1
C49	EQQB1H474JZ	0.47μF	1
C50	EQQB1H223JF	0.022μF	1
C51	EQQB1H104JM	0.1μF	1
C54	EQQB1H474JZ	0.47μF	1
C55	EQQB1H223JF	0.022μF	1
C56	EQQB1H104JM	0.1μF	1

Ref. No.	Part No.	Description	PS
COIL & LINE FILTER			
L1	QLOGT3T1505A	Coil	
JACKS			
JK1, 2	SJJG100A	Jack	2
RESISTORS			
R1~4	△ ERG1ANJP6805	68Ω, 1W, Flame-Proof	4
CAPACITORS			
C1, 2	ECKF1E4732V	0.047μF	2
C3	ECRF1H104ZF	0.1μF	1

CP CONTROL PANEL

Ref. No.	Part No.	Description	PIS
INTEGRATED CIRCUITS			
IC1	SVIGM893A121	Gate Array	1
IC2	HD74LS07P	Hex Buffers	1
TRANSISTORS			
S Q1~4	2SA1015-GR	2SA933STRS (SUB. Part)	4

DIODES				
D2, 5, 49~52, 58, 66~71, 77	MA165	Diode		14
D102, 150, 151, 156~160, 166~171, 205~207	LN282R	LED (Red)		15

COMPONENT COMBINATION				
Z1	EXBPI8103JM	10kΩ×8		1

SWITCHES			
S2, 5, 49~52, 58, 66~71	EVQ21507K	Push Switch	13

IC PROTECTOR				
IP1	Δ	ICP-N10T104	IC Protector	1

VARIABLE RESISTOR			
VR1	QRVG25P01B53	5kΩ B, Main Volume	1

RESISTORS				
R1	ERDS2TJ184	180kΩ		1
R2	ERDS2TJ221	220Ω		1
R3	ERDS2TJ152	1.5kΩ		1
R4	ERDS2TJ102	1kΩ		1
R5~8	ERDS2TJ152	1.5kΩ		4
R9	ERDS2TJ103	10kΩ		1
R10~12, 22~24	ERDS2TJ680	68Ω		6

ACP AC POWER SUPPLY CIRCUIT

Ref. No.	Part No.	Description	PS
COIL & LINE FILTER			
L1	Δ SLTGLF3	Line Filter	1
JACK			
JK1	Δ SJVD0203B	AC Inlet	1
SWITCH			
S1	Δ SSRG100A	Voltage Selector, 1 2 3 4 5 6 7 8	1
FUSES			
F1	Δ XBA1C40NU100	4A, 125V, 1 2 3 4 5 6 7 8 9 10 11 12	1
F1	Δ XBA2C10T80	T1.6A, 250V, 1 2 3 4 5 6 7 8 9 10 11 12	1
F2	Δ XBA2C10T80	T1.0A, 250V, 1 2 3 4 5 6 7 8 9 10 11 12	1
F3	Δ XBA2C10T80	T1.0A, 250V except, 1 2 3 4 5 6 7 8 9 10 11 12	1
CAPACITORS			
C1	Δ ECKCAV1472MF	4700pF, Line Capacitor	1
C2	Δ ECUQ2A104MN	0.1μF, 250V, Across-the Line Capacitor	1

JACK JACK CIRCUIT

Ref. No.	Part No.	Description	P/S
CAPACITORS			
C1	ECEA0JKA470	47μF, 6.3V	1
C2	ECBA1H101KB	100pF	1
C3	ECRF1H104ZF	0.1μF	1
C4	ECEA1HKA010	1μF, 50V	1
C5	ECBA1H101KB	100pF	1
C11, 12	ECEA1CKN100	10μF, 16V	2

PKB PEDAL KEYBOARD CIRCUIT

Ref. No.	Part No.	Description	PS
SWITCHES			
S1, 3	QSTGT001AA	Lever Switch	2
RESISTORS			
R8, 9	ERDS2TJ472	4.7kΩ	2
CAPACITOR			
C1	ECRF1H104ZF	0.1μF	1

MKB1 MANUAL KEYBOARD 1 CIRCUIT

Ref. No.	Part No.	Description	PS
INTEGRATED CIRCUITS			
IC1	MSM7U042016	Gate Array	1
IC2	BR93LC46	1k bit Programmed EEPROM	1
DIODES			
D1~88	MA165	Diode	88
OSCILLATOR			
X1	SVQGA20MX040	20MHz, Ceramic Oscillator	1
RESISTORS			
R1~3	ERDS2TJ472	4.7kΩ	3
CAPACITORS			
C1	ECRF1H104ZF	0.1μF	1
C2	ECCW1H47J	470μF	1
C3, 4	ECOW1H220J5	22μF	2
C5	ECKR1E4732V	0.047μF	1
C6, 7	ECOW1H01J5	100pF	2

MKB2 MANUAL KEYBOARD 2 CIRCUIT

Ref. No.	Part No.	Description	P/PS
DIODES			
D89~176	MA165	Diode	88
COMPONENT COMBINATION			
Z1	EXBPI8332JM	3.3kΩ × 8	1

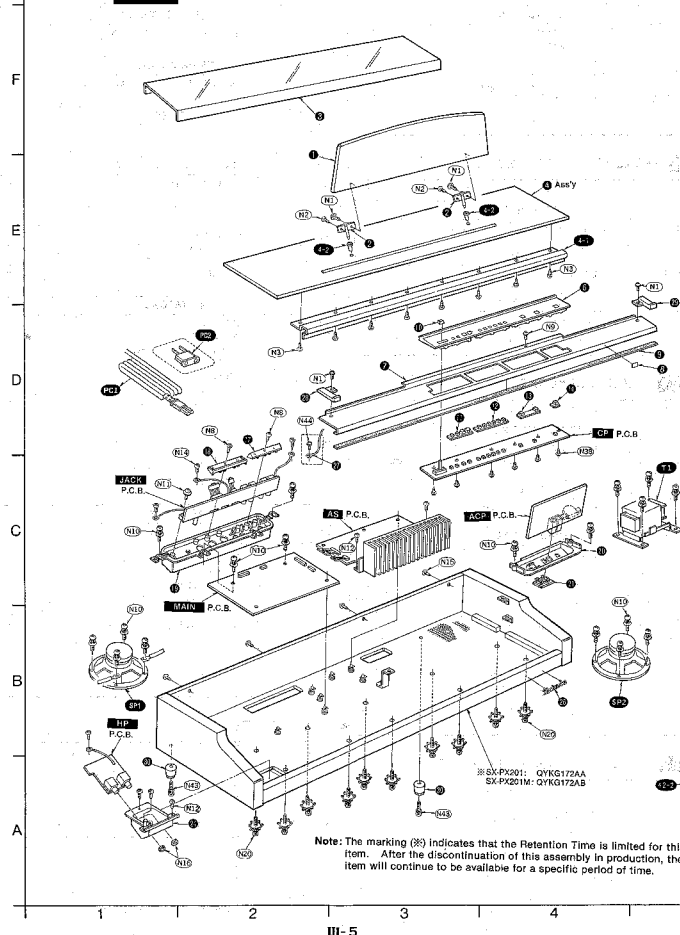
Ref. No.	Part No.	Description	PS
INTEGRATED CIRCUIT			
IC1	SVIGTLF513	Photo Coupler	1
TRANSISTORS			
S Q1~3	2SA1015-GR	2SA933STRS (SUB. Part)	3
DIODES			
D1, 3, 4, 6, 7	MA165	Diode	5
COILS & LINE FILTERS			
L1~5	QLQG73T1505A	Coil	5
JACKS			
JK1	QJSG007AA	PEDAL IN	1
JK2~4	SJSG1370A	MIDI	3
JK5, 6	QJUG003AA	AUX IN	2
JK7, 8	QJUG003AA	LINE OUT	2
RESISTORS			
R1, 2	ERDS2TJ102	1kΩ	2
R4	ERDS2TJ473	47kΩ	1
R5~7	ERDS2TJ102	1kΩ	3
R8, 10	ERDS2TJ680	68Ω	2
R11	ERDS2TJ104	100kΩ	1
R12	ERDS2TJ151	150Ω	1
R14	ERDS2TJ330	33Ω	1
R15	ERDS2TJ104	100kΩ	1
R16	ERDS2TJ221	220Ω	1
R17	ERDS2TJ331	330Ω	1
R18	ERDS2TJ103	10kΩ	1
R21, 22	ERDS2TJ152	1.5kΩ	2
R23, 24	ERDS2TJ102	1kΩ	2
CAPACITORS			
C1~4	ECRF1H104ZF	0.1μF	4
C5, 6	ECGF1H221J	220pF	2
C7	ECKF1E4732V	0.047μF	1
C8	ECEA1HKA010	1μF, 50V	1
C11, 12	ECBA1C222MR	0.0022μF	2
C13	ECRF1H104ZF	0.1μF	1
C14, 15	ECBA1C222MR	0.0022μF	2
C16	ECRF1H104ZF	0.1μF	1

WIRING PARTS

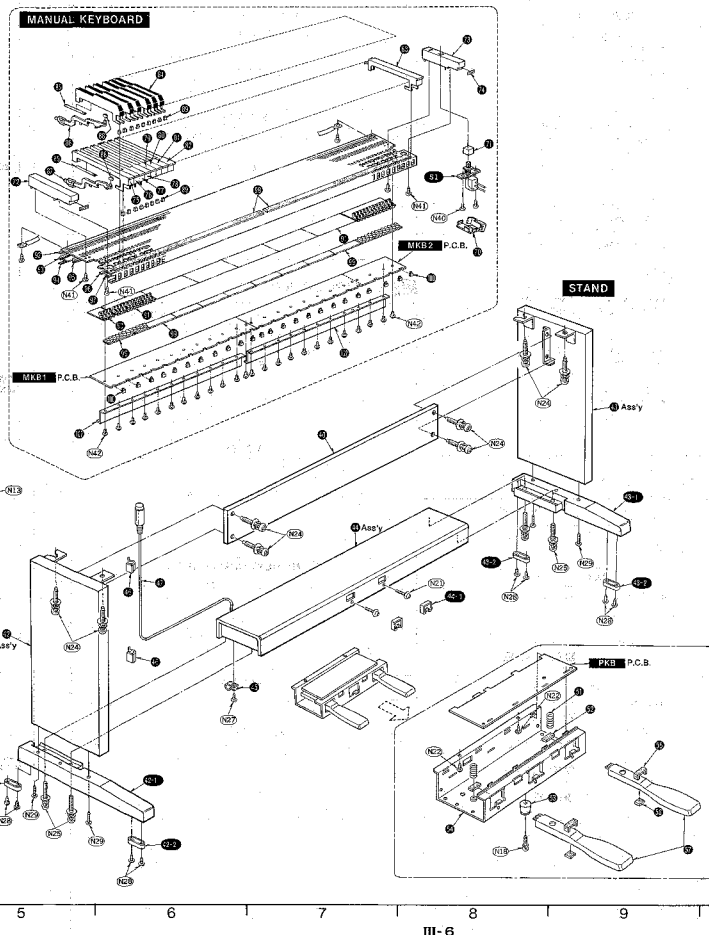
Ref. No.	Part No.	Description	Pr
W1	QEXGSS16055A	Connector with Wire	1
W2	QEXGSS14030A	Connector with Wire	1
W3	QEXGSS06080B	Connector with Wire	1
W4	QEXGSS05025B	Connector with Wire	1
W5	QEXGVH04070B	Connector with Wire	1
W6	QEXGVH03105B	Connector with Wire	1

CABINET PARTS LOCATION

CABINET



Note: The marking (8X) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time.



REPLACEMENT PARTS LIST.....Cabinet and Chassis Parts

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

2. ☐ mark are new parts.

Cabinet Colour

- SX-PX201.....Black • SX-PX201M.....Walnut

- ### 3. Important safety notice

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

4. For part No. with area mark, check the area when placing an order.

5. The raw material indication for synthetic resin
In order to facilitate classification of parts of synthetic resin manufacture and to promote the recycling of natural resources, a raw material symbol for such parts is indicated in the Ref. No./Material column.

SX-PX201 CABINET & CHASSIS PARTS

Part No.	Part No.	Description	PIS
SWITCH			
S1	△ ESB823V	Power Switch	1
SPEAKERS			
SP1, 2	EAS14PL93B	14cm, 8Ω	2
TRANSFORMER			
T1	△ QTPG1M024A	Power Transformer, Others	1
T1	△ QTPG1M022A	Power Transformer, M 1A 10 20	1
T1	△ QTPG1M025A	Power Transformer, X 1A 1A 5A 50 1A 1A	1
POWER CORD & PLUG			
PC1	△ SJAG65	Power Cord, Others	1
PC1	△ QJAG013AA	Power Cord, M 10A 10A	1
PC1	△ QJAG014AA	Power Cord, 10A 10A	1
PC1	△ VJA0733	Power Cord, 15A 10A	1
PC2	△ SJP5213-1	Attachment Plug, X 2A	1

CABINET PARTS

1	QAGAG1031AA	Music Rack	1
2	SBLG230A	Stay	2
3	QFCG022AA	Keycover,	2
		23 24 25 26 27 28	
4	QKQGA069BA	Top Cover Assy	1
4-2	QGGKG0101AA	Ornament	1
	QMRG7021AB	Sleeve	2
6	PS QAGP00054AF	CP Ornament	1
7	QAGPG0065AA	Control Panel	1
8	QQLG068BA	Initial Label	1
9	QMFEG1107AA	Felt (Red)	1
10	SBNG7050A	Knob	1
11	QGUG1191AA	Button	1
12	QGUG1231AA	Button	1
13	QGUG1230AA	Button	1
14	QGUG1229AA	Button	1
17	PS QMRG7028AC	Bracket	1
18	PS QMRG7029AC	Bracket	1
19	PS QGKG0076BB	External Jack Panel	1

SX-PX201M CABINET & CHASSIS PARTS

Ref. No.		Part No.	Description	P/S
SWITCH				
S1	△	ESB823V	Power Switch	1
SPEAKERS				
SP1, 2		EAS14P193B	14cm, 8Ω	2
TRANSFORMER				
T1	△	QTPG1M024A	Power Transformer, Others	1
T1	△	QTPG1M022A	Power Transformer, A MC XM	1
T1	△	QTPG1M025A	Power Transformer, X XM AS MD XT XS	1
POWER CORD & PLUG				
PC1	△	SJAG65	Power Cord, Others	1
PC1	△	QJAG013AA	Power Cord, M MC XM	1
PC1	△	QJAG014AA	Power Cord, XR XL	1
PC1	△	VJA0733	Power Cord, SK TD	1
PC2	△	SJP5213-1	Attachment Plug, X Y	1

CABINET PARTS

0	1	QGAG1031AB	Music Rack	1
2	1	SRLG230B	Stay	1
3	1	QFQG022AA	Keycover,	1
			PS MS MD MR FL	
4	1	QKGQ0605BB	Top Cover Ass'y	1
4-1	1	QCGKG101AB	Ornament	1
4-2	2	QMGRG7021AA	Sleeve	2
5	1	PS QGP30054AF	CP Ornament	1
6	1	QGP30055AA	Control Panel	1
7	1	QQLG0606BA	Initial Label	1
8	1	QMF61107AA	Felt (Red)	1
9	1	SBNG7050A	Knob	1
10	1	QUGU1191AA	Button	1
11	1	QUGU1231AA	Button	1
12	1	QUGU1230AA	Button	1
13	1	QUGU1229AA	Button	1
14	1	QMRG7028AC	Bracket	1
15	1	QMRG7029AC	Bracket	1
16	1	PS QGKG0076BB	External Jack Panel	1

SX-PX201

Ref. No.	Part No.	Description	P/S
20	 QGKG0096DA	AC Jack Panel, 	1
20	 QGKG0096CB	AC Jack Panel, Others	1
21	 SJ89334A	AC Inlet Cover, 	1
21	 SJ89231A	AC Inlet Cover, Others	1
24	QGGK0080AA	Headphone Jack Case	1
26	SGBG160B	Badge	1
27	QEXGRA01011A	Wire, 	1
28	QMRG7044AA	Keycover Stopper L, 	1
29	QMRG7045AA	Keycover Stopper R, 	1
30	QKAG0012AA	Foot	2

STAND

40	QKQGD066AA	Crossboard	1
42	QKQGB358AA	Left Plank Ass'y	1
42-1	QKSG8008AA	Leg, Left	1
42-2	SHRG2130B-K	Foot	2
43	QKQGB359AA	Right Plank Ass'y	1
43-1	QKSG8007AA	Leg, Right	1
43-2	SHRG2130B-K	Foot	2
44	QKQGM059AA	Pedal Box Ass'y	1
44-1	QGGK0113AA	Ornament	2
45	SHRG1230A	Cord Clamper	1
46	SHRG9620A	Cord Clamper	2
47	QJLG007AA	Pedal Cord	1
51	QMBG009AA	Spring	2
52	QMF01133AA	Felt	2
53	QKAG0011AA	Foot	1
54	QMWG30109A	Pedal Chassis	1
55	QMF01134AA	Felt	2
56	QMF01135AA	Felt	2
57	STBG3120A	Pedal	2

MANUAL KEYBOARD

70	 SHRG8390A	Cover, Power SW.	1
71	QGU01040AA	Button, Power Switch	1
72	 QGPG0042AB	End Cover Panel, Left	1
73	 QGPG0041BD	End Cover Panel, Right	1
74	QMF01104AA	Felt	2
75	 QMWG1001AA	White Key (First Octave A Key)	1
76	 QMWG1002AA	White Key (B Key)	8
77	 QMWG1003AA	White Key (C Key)	7
78	 QMWG1004AA	White Key (D Key)	7
79	 QMWG1005AA	White Key (E Key)	7
80	 QMWG1006AA	White Key (F Key)	7
81	 QMWG1007AA	White Key (G Key)	7
82	 QMWG1008AA	White Key (A Key)	7
83	 QMWG1009AA	White Key (Top Octave C Key)	1
84	QMWG2001AA	Black Key	36
85	SUSG534A	Spring	88
86	QMWG8019CA	Hammer (Black Key)	36
87	QMWG8017DA	Hammer (White Key)	52
88	SHGG9121A	Rubber Cap (Hammer)	88
89	 QMWG8024BA	Key Guide	88
90	 QMWG8022AA	Fulcrum (4 pcs. on one)	1
91	 QMWG8021AA	Fulcrum (12 pcs. on one)	7
92	SHRGA9080A	Sponge	2
93	QMF01073AA	Felt	2

SX-PX201M

Ref. No.	Part No.	Description	P/S
20	 QGKG0096DA	AC Jack Panel, 	1
20	 QGKG0096CB	AC Jack Panel, Others	1
21	 SJ89334A	AC Inlet Cover, 	1
21	 SJ89231A	AC Inlet Cover, Others	1
24	QGGK0080AA	Headphone Jack Case	1
26	SGBG160B	Badge	1
27	QEXGRA01011A	Wire, 	1
28	QMRG7044AA	Keycover Stopper L, 	1
29	QMRG7045AA	Keycover Stopper R, 	1
30	QKAG0012AA	Foot	2

STAND

40	QKQGD066AB	Crossboard	1
42	QKQGB358AB	Left Plank Ass'y	1
42-1	QKSG8008AB	Leg, Left	1
42-2	SHRG2130B-K	Foot	2
43	QKQGB359AB	Right Plank Ass'y	1
43-1	QKSG8007AB	Leg, Right	1
43-2	SHRG2130B-K	Foot	2
44	QKQGM059AB	Pedal Box Ass'y	1
44-1	QGGK0113AA	Ornament	2
45	SHRG1230A	Cord Clamper	1
46	SHRG9620A	Cord Clamper	2
47	QJLG007AA	Pedal Cord	1
51	QMBG009AA	Spring	2
52	QMF01133AA	Felt	2
53	QKAG0011AA	Foot	1
54	QMWG30109A	Pedal Chassis	1
55	QMF01134AA	Felt	2
56	QMF01135AA	Felt	2
57	STBG3120A	Pedal	2

MANUAL KEYBOARD

70	 SHRG8390A	Cover, Power SW.	1
71	QGU01040AA	Button, Power Switch	1
72	 QGPG0042AB	End Cover Panel, Left	1
73	 QGPG0041BD	End Cover Panel, Right	1
74	QMF01104AA	Felt	2
75	 QMWG1001AA	White Key (First Octave A Key)	1
76	 QMWG1002AA	White Key (B Key)	8
77	 QMWG1003AA	White Key (C Key)	7
78	 QMWG1004AA	White Key (D Key)	7
79	 QMWG1005AA	White Key (E Key)	7
80	 QMWG1006AA	White Key (F Key)	7
81	 QMWG1007AA	White Key (G Key)	7
82	 QMWG1008AA	White Key (A Key)	7
83	 QMWG1009AA	White Key (Top Octave C Key)	1
84	QMWG2001AA	Black Key	36
85	SUSG534A	Spring	88
86	QMWG8019CA	Hammer (Black Key)	36
87	QMWG8017DA	Hammer (White Key)	52
88	SHGG9121A	Rubber Cap (Hammer)	88
89	 QMWG8024BA	Key Guide	88
90	 QMWG8022AA	Fulcrum (4 pcs. on one)	1
91	 QMWG8021AA	Fulcrum (12 pcs. on one)	7
92	SHRGA9080A	Sponge	2
93	QMF01073AA	Felt	2

SX-PX201

Ref. No.	Part No.	Description	P/S
94	SHSG3461A	Felt	1
95	QMF61101AA	Felt	2
96	QMF61061AA	Felt	2
97	QMF61060AA	Felt	2
98	QMF61086AA	Felt	2
99	QMWG6006AA	Rubber Switch (8 pcs. on one)	11
100	SHRG9751A	P.C.B. Holder	24
101	QMWG3003BA	Chassis	1
102	SUWG3157A	Angle	2

SCREWS & WASHERS

N1	XTT4+10AFZ	Screw	4
N2	XTB3+10AFZ	Screw	2
N3	XTT4+10A	Screw	8
N8	XTW3+10Q	Screw	2
N9	XTW3+10JFZ	Screw	1
N10	XYN4+F25	Screw with Washer	14
N11	XTWSG2	Screw with Washer	1
N12	XTB35+12A	Screw	5
N13	XYN4+F16	Screw with Washer	4
N14	SNEG2660A	Screw	3
N15	XTT4+30AFZ	Screw	4
N16	XNS12FZ	Nut	2
N18	XTN4+16F	Screw with Washer	1
N20	QHDG021AA	Screw with Washer	10
N21	XYN4+F16FZ	Screw with Washer	2
N22	XTT4+16A	Screw	2
N24	QHDG016AB	Screw with Washer	8
N25	XYN6+F40	Screw with Washer	4
N27	XTB35+14A	Screw	1
N28	XTB4+16A	Screw	9
N29	XTT4+25AFZ	Screw	4
N38	XTV3+10G	Screw	6
N40	XTV3+10C	Screw	4
N41	XTB4+12A	Screw	4
N42	XTW3+10T	Screw	24
N43	XTB35+20A	Screw	2
N44	SNEG2660A	Screw	1

M MC MM E2

SX-PX201M

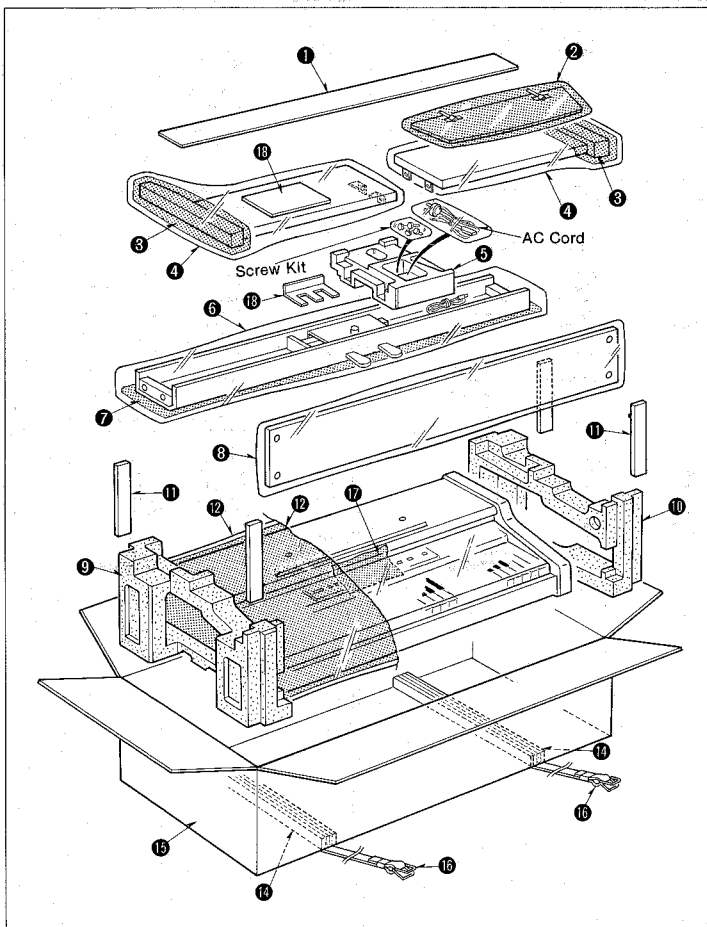
Ref. No.	Part No.	Description	P/S
94	SHSG3461A	Felt	1
95	QMF61101AA	Felt	2
96	QMF61061AA	Felt	2
97	QMF61060AA	Felt	2
98	QMF61086AA	Felt	2
99	QMWG6006AA	Rubber Switch (8 pcs. on one)	11
100	SHRG9751A	P.C.B. Holder	24
101	QMWG3003BA	Chassis	1
102	SUWG3157A	Angle	2

SCREWS & WASHERS

N1	XTT4+10AFZ	Screw	4
N2	XTB3+10AFZ	Screw	2
N3	XTT4+10A	Screw	8
N8	XTW3+10Q	Screw	2
N9	XTW3+10JFZ	Screw	1
N10	XYN4+F25	Screw with Washer	14
N11	XTWSG2	Screw with Washer	1
N12	XTB35+12A	Screw	5
N13	XYN4+F16	Screw with Washer	4
N14	SNEG2660A	Screw	3
N15	XTT4+30AFVC	Screw	4
N16	XNS12FZ	Nut	2
N18	XTN4+16F	Screw with Washer	1
N20	QHDG021AA	Screw with Washer	10
N21	XYN4+F16FZ	Screw with Washer	2
N22	XTT4+16A	Screw	2
N24	QHDG016AA	Screw with Washer	8
N25	XYN6+F40	Screw with Washer	4
N27	XTB35+14A	Screw	1
N28	XTB4+16A	Screw	9
N29	XTT4+25AFZ	Screw	4
N38	XTV3+10G	Screw	6
N40	XTV3+10C	Screw	4
N41	XTB4+12A	Screw	4
N42	XTW3+10T	Screw	24
N43	XTB35+20A	Screw	2
N44	SNEG2660A	Screw	1

M MC MM E2

PACKING



PACKING PARTS

Ref. No.	Part No.	Description	P/S
PACKING PARTS			
1	QPNG0358AA	Top Cardboard	1
2	SPHG1490A	Protection Sheet	1
3	SPHG1730A	Protection Sheet	2
4	QPF0011AA	Polyethylene Bag	1
5	QPNG0357BA	Pad	1
6	QPF0026AA	Polyethylene Bag	1
7	QPHG020AA	Protection Sheet	1
8	QPHG033AA	Polyethylene Bag	1
9	QPNG0355AA	Pad	1
10	QPNG0356AA	Pad	1
11	QPOG023AA	Prop	4
12	QPHG028AA	Protection Sheet	1
13	SPHG2200A	Polyethylene Bag	1
14	QPNG0360AA	Pad	2
15	QPGG0232AB	Carton, SX-PX201	1
15	QPGG0232AC	Carton, SX-PX201M	1
16	SPSG40A	Band	2
17	QPHG018AA	Protection Sheet, 5A X XS 20 2Y 2Z 3A	1
18	QPNG0404AA	Pad	1
OPERATING INSTRUCTION MANUAL			
19	QQFGPX201AA	Operating instruction manual, 1A	1
19-1	QQTG0300A	ENGLISH	1
19	QQFGPX201BA	Operating instruction manual, 5A	1
19-1	QQTG0299A	DANSK	1
19-2	QQTG0301A	ENGLISH, FRANCAIS, ESPANOL, ITALIANO, NERDERLANDS, 中文	1
19	QQFGPX201CA	Operating instruction manual, Others	1
19-1	QQTG0301A	ENGLISH, FRANCAIS, ESPANOL, ITALIANO, NERDERLANDS, 中文	1
19	QQFGPX201DA	Operating instruction manual, 2A 2A	1
19-1	QQTG0302A	DEUTSCH	1
19	QQFGPX201EA	Operating instruction manual, 3A 3A	1
19-1	QQTG0301A	ENGLISH, FRANCAIS, ESPANOL, ITALIANO, NERDERLANDS, 中文	1
19-2	QQTG0302A	DEUTSCH	1

